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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,932	08/21/2003	Dominique Gauthier	86503-76	7374
28291 7590 11/28/2007 FETHERSTONHAUGH - SMART & BIGGAR 1000 DE LA GAUCHETIERE WEST SUITE 3300 MONTREAL, QC H3B 4W5 CANADA			EXAMINER RUSSELL, WANDA Z	
			ART UNIT 2616	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/644,932

Applicant(s)

GAUTHIER ET AL.

Examiner

Wanda Z. Russell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2007 and April 21, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-3, 6, 10-12, 15, 17-20, 21, 27, 30-32, and 35-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonsson et al. (U.S. Patent 5,513,246).

For **claim 1**, Jonsson et al. teach a device (Fig. 3), for integration into a base station (col. 3, lines 3-4) of a type that includes at least one radio-transceiver (124, 125 –Fig. 3. It is obvious that transmitter and receiver can be combined as transceiver for the functions) for receiving and transmitting radio communications (Fig. 3) to a plurality of subscriber stations (col. 2, lines 33); the device comprising:

an input device (127-Fig. 3) operable to be coupled to the at least one radio-transceiver for receiving a handoff signal (col. 3, line 37) from the at least one radio-transceiver at a first mode respective to a first coverage area of the communication system (circle within V –Fig. 1e);

an output device (122-Fig. 3) for delivering the handoff signal at a second mode respective to a second coverage area (circle within VII –Fig. 1e);

a converter (130-Fig. 3) coupled to said input device and said output device for translating the handoff signal from the first mode into the second mode (col. 7, lines 38-41); the second mode handoff signal for indicating to a subscriber station (Fig. 2, and

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col. 3, lines 1-2) operating in the second mode within both of the coverage areas (B C D -Fig. 1e) to switch from the second mode to the first mode so that the subscriber station operates in the first mode (S17-S19-S21-S25 -Fig. 5a).

For **claim 2**, Jonsson et al. teach the device according to claim 1 wherein said first coverage area and said second coverage area of said system are each based on a respective protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA (col. 5, lines 47-55).

For **claim 3**, Jonsson et al. teach the device according to claim 2 wherein said protocols respective to said coverage areas are different (col. 5, lines 47-55).

For **claim 6**, Jonsson et al. teach the device according to claim 1 wherein said output device is operable to transmit (Fig. 3) said handoff signal to a base station power combiner (123-Fig. 3) for delivering said converted handoff signal to a base station antenna (Fig. 3) for outputting said handoff signal.

For **claims 10-12**, they are method claims corresponding to method claims 1-3, therefore they are rejected for the same reason above.

For **claim 15**, it is a method claim of claim 6, therefore it is rejected for the same reason above.

For **claims 17-20, and 21** they are system (Fig. 1e) claims including first base station (Fig. 1e) and second base station (Fig. 1e) corresponding to claims 1-4, and 6 respectively, therefore they are rejected for the same reason above.

For **claim 27**, Jonsson et al. teach a device (Fig. 3) for use in a wireless communication system comprising:

an input device (127-Fig. 3) coupled to a base-station radio-transceiver for receiving a handoff signal from said base-station radio-transceiver (124, 125 –Fig. 3. It is obvious that transmitter and receiver can be combined as transceiver) at a first mode (circle within V –Fig. 1e) respective to a first coverage area of the communication system;

an output device (122-Fig. 3) for delivering the handoff signal (col. 3, line 37) at at least one additional mode (circle within VII –Fig. 1e) respective to at least one additional coverage area;

a converter (130-Fig. 3) for translating the handoff signal from the first mode into the at least one additional mode (col. 7, lines 38-41); the handoff signal for each of the at least one additional mode indicating to a subscriber station (Fig. 2, and col. 3, lines 1-2) operating at the respective additional mode within the respective coverage area (B C D –Fig. 1e) to switch from the respective additional mode to the first mode so that the subscriber station operates in the first mode (S17-S19-S21-S25 -Fig. 5a).

For **claim 30**, Jonsson et al. teach a base station (Fig. 3) for use in a wireless communication system (Fig. 1e) comprising:

a radio transceiver (124, 125 –Fig. 3. It is obvious that transmitter and receiver can be combined as transceiver) for receiving and transmitting (Fig. 3) radio communications with respect to a plurality of subscriber stations (Fig. 1e);

data-processing equipment (left side of Fig. 3) for carrying at least a portion of said communications over a backhaul; and

a device (Fig. 3) for performing handoff comprising an input device (127-Fig. 3) for receiving a handoff signal from said radio-transceiver signal at a first mode (circle within V –Fig. 1e) respective to a first coverage area of the communication system; an output device (122-Fig. 3) for delivering the handoff signal at a second mode (circle within VII –Fig. 1e) respective to a second coverage area; a converter (130-Fig. 3) coupled to said input device and said output device for translating the handoff signal from the first mode into the second mode; the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas (B C D –Fig. 1e) to switch from the respective additional mode to the first mode so that the subscriber station operates in the first mode (S17-S19-S21-S25 -Fig. 5a).

For **claim 31**, Jonsson et al. teach the base station according to claim 30 wherein said base station is based on the CDMA protocol (col. 5, line 55).

For **claim 32**, Jonsson et al. teach the base station according to claim 30 wherein the radio-transceiver is operable to receive and transmit radio communications with respect to the plurality of subscriber stations in the first mode (Fig. 1e).

For **claim 35**, Jonsson et al. teach a base station (Fig. 3) that incorporates the device according to claim 1.

For **claim 36**, Jonsson et al. teach the base station according to claim 35 wherein the base station further comprises a base station power combiner (123-Fig. 3) and a base station antenna (Fig. 3) coupled to said base station power combiner for transmitting radio communications to a plurality of subscriber stations; said output

device further operable to transmit said handoff signal to said base station power combiner (Fig. 3).

For **claim 37**, Jonsson et al. teach the base station according to claim 35 wherein said first coverage area and said second coverage area of said system are each based on a respective protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA (col. 5, lines 47-55).

For **claim 38**, Jonsson et al. teach the base station according to claim 37 wherein said protocols respective to said coverage areas are different (col. 5, lines 47-55).

3. **Claims 4, 5, 13, 14, 16, 39, and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonsson et al. (U.S. Patent 5,513,246) in view of Bernstein et al. (U.S. Patent 6,574,203 B2).

For **claim 4**, Jonsson et al. teach everything claimed as applied above (see claim 1). In addition, Jonsson et al. teach a conventional CDMA re-direction signal (col. 5, line 55). However, Jonsson et al. fail to specifically teach said first mode is a first frequency and said second mode is a second frequency different from said first frequency.

Bernstein et al. teach said first mode is a first frequency (current frequency, col. 3, line 23) and said second mode is a second frequency (new frequency, col. 3, line 23) different from said first frequency.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jonsson et al. with Bernstein et al. to obtain the invention as specified, for more precisely tuned communication network.

For **claim 5**, Jonsson et al. and Bernstein et al. teach everything claimed as applied above (see claim 1 and 4). In addition, Jonsson et al. teach the device according to claim 4 wherein said first coverage area and said second coverage area are served by respective CDMA base stations (col. 5, line 55).

For **claims 13-14**, they are method claims of claims 4-5, therefore they are rejected for the same reason above.

For **claim 16**, it is a method claim of claim 4, therefore it is rejected for the same reason above.

For **claim 39**, Jonsson et al. and Bernstein et al. teach everything claimed as applied above (see claim 1 and 35). In addition, Jonsson et al. teach the base station according to claim 35 wherein said handoff signal is a conventional CDMA re-direction signal (col. 5, line 55).

For **claim 40**, Jonsson et al. and Bernstein et al. teach everything claimed as applied above (see claim 1, 35 and 39). In addition, Jonsson et al. teach the base station according to claim 39 wherein said base station is a first CDMA base station and said second coverage area is served by a second CDMA base station different from said first CDMA base station (Fig. 1e).

4. **Claims 7, 8, 9, 22, 24, and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonsson et al. (U.S. Patent 5,513,246) in view of Bernstein et al. (U.S. Patent 6,574,203 B2), and Change et al. (U.S. Patent 6,621,811 B1).

For **claim 7**, Jonsson et al. and Bernstein et al. teach everything claimed as applied above (see claim 1 and 4). In addition, Jonsson et al. teach the device



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according to claim 4 wherein said converter comprises a down-converter (receiver, 125-Fig. 3) operable to receive said handoff signal from said input device and for converting said handoff signal from said first frequency to an intermediate frequency and an up-converter (transmitter, 124-Fig. 3) for converting said intermediate frequency to said second frequency.

However, they fail to specifically teach an intermediate frequency.

Chang et al. teach such an intermediate frequency (col. 9, lines 51-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jonsson et al. with Bernstein et al. and Chang et al. to obtain the invention as specified for providing a precision handoff.

For **claim 8**, Jonsson et al. and Bernstein et al. teach everything claimed as applied above (see claim 1, 4 and 7).

However, they fail to specifically teach the device according to claim 7 further comprising a microcontroller operably connected to said down-converter and said up-converter such that said first frequency and said second frequency is user-selectable.

Bernstein et al. teach the device according to claim 7 further comprising a microcontroller operably connected to said down-converter and said up-converter such that said first frequency and said second frequency is user-selectable (performed in a mobile station, col. 2, lines 34-38).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jonsson et al. with Bernstein et al. and Chang et al. to obtain the invention as specified for providing user friendly handoff.

For **claim 9**, Jonsson et al., Bernstein et al., and Chang teach everything claimed as applied above (see claim 1, 4, 7 and 8). In addition, Jonssen et al. teach generating alarms if said converter operates outside of desired specifications (col. 11, lines 31-40); and Bernstein et al. teach the device wherein said microcontroller is further operable to perform at least one of logging (col. 8, lines 35-39) various conversions performed by said converter.

For **claims 22-24**, they are system claims of claims 7-9, therefore they are rejected for the same reason above.

For **claim 34**, it is a combination of claims 1, 4, and 7, therefore it is rejected for the same reason above.

#### ***Response to Amendment***

5. Applicant's amendment filed October 5, 2007 has been received and considered.

#### ***Response to Arguments***

6. Applicant's arguments, filed October 5, 2007, with respect to the rejection(s) of claims 1-34 have been fully considered. The examiner failed to use the preliminary amendment for the claims. A new ground(s) of rejection is made, therefore the rejection is made non-final.

See detailed rejection above.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Z. Russell whose telephone number is (571)

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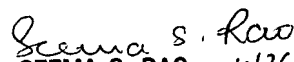
270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZR



  
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